REMARKS

Claims 1, 3, 4, 6-9, 11, 12 and 14-22 remain in this application and are rejected. Claims 2, 5, 10 and 13 are previously cancelled. Claims 1, 4, 7, 8, 9 and 12 are amended herein to clarify the invention, to broaden language as deemed appropriate and to address matters of form unrelated to substantive patentability issues.

The courtesies extended by the Examiner in a telephonic interview conducted on September 20, 2004 are gratefully appreciated. In the interview, the amendments to the claims, the invention and the prior art were discussed.

Claim 1, 3, 4, 6-9, 11, 12 and 14-22 are rejected under 35 U.S.C. §103(a) as being unpatentable over Hayashida et al. (U.S. Patent No. 6,409,596) in view of Yamashita et al. (U.S. Patent No. 5,982,377).

The Examiner's rejection is respectfully traversed for the reasons set forth below.

Independent claims 1, 4, 7-9 and 12 are amended to clarify important features of the invention. Claim 1 now recites that the game system includes a coordinate conversion unit for reading out the data of the vertex coordinates of the plurality of polygons "constituting a single three-dimensional object" and the data of a plurality of perspective conversion matrices different from each other from the storage unit, and performing perspective projection conversion of each vertex

coordinate of the polygons by using each perspective conversion matrices "at the same time to thereby produce a plurality of sets of converted vertex coordinates of the plurality of polygons, each set of the plurality of sets constituting a single three-dimensional object". Moreover, claim 1 now recites that the image processor forms display images of all of the three-dimensional objects on the projection plane of the viewpoint coordinate system at the same time based on the plurality of sets of converted vertex coordinates. Claims 4, 7-9 and 12 are amended to recite similar features.

Thus, in the claimed embodiments of the invention, a plurality of perspective conversion matrices are applied to the vertex coordinates of the plurality of polygons constituting a single three-dimensional object, at the same time, to produce plural sets of converted vertex coordinates of the plurality of polygons, each of the plural sets constituting a single three-dimensional object. Thereafter, the images of the plurality of objects, produced from the polygon data of one object, are displayed at the same time.

In the invention, a plurality of objects are produced by applying the plurality of perspective conversion matrices, i.e., multiple conversion matrices, to the polygon vertex data of one object. In the example of the specification, plural conversion matrices are applied to the vertex data of the polygons A-C of a single object 50 (i.e. a gun cartridge) at the same time to produce the converted vertex data of polygons for plural objects 50, and the images of the plural objects 50 are displayed at the same

time as shown in FIG. 5. Thus, from a single object, multiple images of that object are derived and displayed.

Hayashida et al. does not disclose the simultaneous application of a plurality of conversion matrices to a single object to produce a plurality of converted vertex coordinates, each constituting a single object, so that identical displays of the same object can be displayed at the same time in different positions.

Hayashida et al. describes performing perspective coordinate conversion of shape data of a plurality of objects, i.e., motorcycle, landforms and backgrounds. However, Hayashida et al. does not disclose, teach or suggest applying a plurality of matrices at the same time to produce a plurality of sets of converted coordinates constituting a plurality of objects. Rather, Hayashida et al. starts with a polygon representing a motorcycle and applies a single conversion matrix to form a single motorcycle to be displayed on the screen ("a conversion matrix for converting such coordinate values to a viewpoint coordinate system and landform data...are designated to the geometrizer 110" - col. 8, lines 33-36).

As to the use of different matrices, Hayashida et al. describe changing the matrices when the viewpoint is changed (col. 4, lines 58-64). However, Hayashida et al. does not use different matrices at the same time, and does not display image of the converted coordinate data at the same time. For example, Hayashida et al. uses matrix-A in a viewpoint-A to display the image-A of the motorcycle, and uses matrix-B in a viewpoint-B to display the image-B when the viewpoint is changed to

the viewpoint-B. However, the matrices-A and -B are never used at the same time, and the image-A and the image-B are never displayed at the same time as in the claimed embodiments of the invention.

Since Hayashida et al. does not disclose all of the features now set forth in independent claims 1, 4, 7-9 and 12, it cannot be combined with any purported teachings of Yamashita et al. to render obvious the embodiments of the invention set forth in claims 1, 3, 4, 6-9, 11, 12 and 14-22.

In view of the arguments presented above, it is respectfully submitted that claims 1, 3, 4, 6-9, 11, 12 and 14-22 are patentable over Hayashida et al. in view of Yamashita et al. under 35 U.S.C. §103(a).

In the event minor changes to the claims are deemed necessary to place the application in condition for allowance, the Examiner is respectfully requested to contact the undersigned to discuss this application.

Applicant respectfully requests a one month extension of time for responding to the Office Action. Please charge the fee of $110 for the extension of time to Deposit Account No. 10-1250.

Docket No. F-6961 Ser. No. 09/842,931

In light of the foregoing, the application is now believed to be in proper form for allowance of all claims and notice to that effect is earnestly solicited. Please charge any deficiency or credit any overpayment to Deposit Account No. 10-1250.

Respectfully submitted,
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